CLAIMS:

1. A electronic test instrument, comprising:

a probe for acquiring an AC voltage input signal;

a converter circuit connected to the probe for converting the AC voltage signal to a DC control level voltage proportional to the AC voltage signal; and

a motor having an eccentric for creating vibration when the motor is activated, the motor being activated in response to the DC control level voltage so as to run at a rate proportional to the AC voltage input signal.

2. The electronic test instrument of claim 1 further comprising a motor drive and switching regulator circuit connected between the converter circuit and the motor, the motor drive and switching regulator circuit being responsive to the DC control level voltage.

3. The electronic test instrument of claim 2 further comprising:

a variable duty cycle square wave generator circuit connected between the converter circuit and the motor drive and switching regulator circuit, the variable duty square wave generator circuit creating a series of on-off pulses and being responsive to the DC control level voltage to make the width of at least one of the on or off pulses proportional to the DC control level voltage.

4. The electronic test instrument of claim 2 wherein the motor drive and switching regulator circuit includes a battery and a chopper circuit that efficiently decreases the voltage from the battery prior to applying it to the motor.

5. The electronic test instrument of claim 1 further comprising:

a reference voltage;

a comparator that provides an on signal when the DC control level voltage is greater than the reference voltage; and

a gate circuit responsive to the on signal to permit activation of the motor.

6. The electronic test instrument of claim 1 further comprising a clamp for engaging an AC line.

7. A electronic test instrument, comprising:

a probe for acquiring an AC voltage input signal;

a first converter circuit for converting the AC voltage input signal to a DC equivalent reference voltage signal;

a band reject filter circuit for notching out a selected frequency signal from the AC voltage input signal to create an AC non-fundamental signal;

a second converter circuit for converting the AC non-fundamental signal to a distortion signal which is proportional to the total distortion and noise in the AC voltage input signal;

a comparator circuit for comparing the distortion signal to the DC equivalent reference voltage; and

an indicator for indicating at least one of the conditions where the DC non-fundamental signal is above or below the DC equivalent reference voltage.

8. The electronic test instrument of claim 7 further comprising a pre-amplifier circuit between the probe and the band reject filter circuit.

9. The electronic test instrument of claim 7 further comprising a ripple filter for the DC equivalent reference voltage.

10. The electronic test instrument of claim 7 further comprising:

a converter circuit connected to the probe for converting the AC voltage signal to a DC control level voltage proportional to the AC voltage signal; and

a motor having an eccentric for creating vibration when the motor is activated, the motor being activated in response to the DC control level voltage so as to run at a rate proportional to the AC voltage input signal.

11. An electronic test instrument, comprising:

a housing having first and second jaws at one end of the housing forming a clamp, at least one of the jaws being movable into and out of engagement with the other jaw;

a blade protruding from one of said jaws and having a sensor embedded therein;

an electrical circuit in the housing in electrical connection with the sensor, the circuit being operable to indicate the presence of a voltage near the blade.

12. The electronic test instrument of claim 11 further comprising:

a probe for acquiring an AC voltage input signal;

a converter circuit connected to the probe for converting the AC voltage signal to a DC control level voltage proportional to the AC voltage signal; and

a motor having an eccentric for creating vibration when the motor is activated, the motor being activated in response to the DC control level voltage so as to run at a rate proportional to the AC voltage input signal

13. The electronic test instrument of claim 12 further comprising:

a first converter circuit for converting the AC voltage input signal to a DC equivalent reference voltage signal;

a band reject filter circuit for notching out a selected frequency signal from the AC voltage input signal to create an AC non-fundamental signal;

a second converter circuit for converting the AC non-fundamental signal to a distortion signal which is proportional to the total distortion and noise in the AC voltage input signal;

a comparator circuit for comparing the distortion signal to the DC equivalent reference voltage; and

an indicator for indicating at least one of the conditions where the DC non-fundamental signal is above or below the DC equivalent reference voltage.

14. The electronic test instrument of claim 11 further comprising:

a probe for acquiring an AC voltage input signal;

a first converter circuit for converting the AC voltage input signal to a DC equivalent reference voltage signal;

a band reject filter circuit for notching out a selected frequency signal from the AC voltage input signal to create an AC non-fundamental signal;

a second converter circuit for converting the AC non-fundamental signal to a distortion signal which is proportional to the total distortion and noise in the AC voltage input signal;

a comparator circuit for comparing the distortion signal to the DC equivalent reference voltage; and

an indicator for indicating at least one of the conditions where the DC non-fundamental signal is above or below the DC equivalent reference voltage.